REMARKS

The present response is responsive to the Examiner's rejections noted in the Final Office Action dated December 18, 2003.

Claims 1, 24, 27 and 28 have been amended. Claim 25, 26 and 29 had been canceled. Claims 30-32 have been added. Claims 1- 24, 27, 28 and 30-32 remain pending in this application.

1. Claim Rejections

The Examiner rejected claims 1, 14-15 and 24 under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,151,197 to Larson in view of U.S. Patent No. 5,982,584 to Bennin. The Examiner rejected claims 2-8 and 27 under 35 USC 103(a) as being unpatentable over Larson in view of Bennin and further in view of U.S. Patent No. 6,388,843 to Takagi. The Examiner rejected claims 9-13, 21-23 and 28 under 35 USC 103(a) as being unpatentable over Larson in view of Bennin and further in view of U.S. Patent No. 5,986,853 to Simmons. Finally, the Examiner rejected claims 16-20 under 35 USC 103(a) as being unpatentable over Larson in view of Bennin and further in view of U.S. Patent No. 6,014,290 to Suprmaniam. These rejections are respectfully traversed below.

2. The Invention

The claimed invention is directed to an integrated suspension assembly for supporting a slider in a magnetic storage system, comprising a unique limiter and flexure configuration. The flexure has a first section attached to the load beam, and a second section defining a slider

mounting section and a frame that defines an aperture into which the slide mounting section extends in a direction towards the first section, and terminating in an end that interacts with the free end of the limiter.

3. Deficiencies of the Prior Art

Applicant amended claims 1, 24, 27 an 28 to clarify that the slider mounting section extends into the **aperture** defined by the **frame** of the second section of the flexure member, in a **direction towards the first section** of the flexure member, and **terminating in an end** that interacts with the limiter.

a. Rejection of Independent Claim 1 based on Larson and Bennin

Applicant respectfully submits that there is no disclosure in Larson or Bennin as to if and how the Larson suspension assembly can and should be modified with integrated leads in the manner suggested only by the Examiner.

Claim 1 recites that the second section of the flexible member comprises a slider mounting section and separately a frame that defines an aperture. The slider mounting section extends into the aperture defined by the frame, in a direction towards the first section of the flexible member. For example, referring to the embodiment shown in Fig. 4 of the present application, the slider mounting section extends along a longitudinal axis of the flexure assembly, into an aperture defined by a frame. Referring also to Fig. 2 of the present application, the slider 40 is mounted on a slider mounting section (below the view of the slider), which has an end 60 that interacts with the limiter on the load beam.

In contradistinction, referring to Figs. 4 and 6 in Larson, Larson discloses the deployment of limiters 360 that act on the tabs 358, which extend from the side rails or side frames of the flexure 354 which defines a central aperture. Figs. 4 and 6 in Larson together show that the slider 400 is supported by a central section of the flexure 354, located between the side frames. In order words, the tabs 358 are found on the side frames of the flexure which surrounds the slider, but not on the support for the slider 400. There is no structure on the support for the slider 400 that interacts with any of the limiters. It is the tabs 358 on the side frames (that define the aperture) that interact with the limiters. In the context of claim 1, it is clear that the tabs 358 are not found at a terminating end of a slider mounting section that extends into the aperture in a direction towards the first section of the flexible member.

Accordingly, Larson does not teach an integrated lead suspension assembly comprising a flexure assembly that comprises "... a first section of the flexible member being fixedly attached to the load beam, and a second section of the flexible member defining a slider mounting section for supporting a slider and a frame that defines an aperture ..., wherein the slider mounting section extends into the aperture in a direction towards the first section, terminating in an end that interacts with the limiter in its second position.

Bennin does not make up for the deficiencies of Larson. Bennin does not disclose any suspension limiter, much less the inventive limiter configuration offered by the flexure assembly and the load beam of the present invention. More specifically, Bennin also does not disclose a suspension assembly having the end of the slider mounting section interact with the limiter. Accordingly, even if Bennin may somehow be combined with Larson, the combination does not result in the present invention defined in independent claim 1.

Further, there is no suggestion to combine the teaching of Larson and Bennin in the first place. Larson is not directed to an integrated lead suspension assembly. There is no suggestion in Larson or Bennin, if and how the Larson suspension assembly can and should be modified to include integrated leads. Applicant respectfully submits that with integrated leads, the leads are attached to the surface of a support flexible/suspension member, which also supports the slider. As such, the integrated leads must be routed around the sides of the flexure of the suspension member (i.e., around the sides of the slider), in order to reach the magnetic recording/write heads at the end of the slider towards the distal end of the suspension assembly. (The magnetic heads are at the end of the slider because of the way the suspension assembly is supported with respect to the rotation of the magnetic disk.) Applicant further submits that the side rails of the flexure are some of the most sensitive part of the flexure/gimbals. They are therefore not the best places to rely on for limiter interactions. The interactions of the side rails of the flexure with the limiters not only could easily damage the performance of the flexure, it could also damage the integrated leads on the side rails of the flexure. In the present invention defined in claim 1, the limiter does not directly interact with the flexure on the sides of the slider, but instead interacts with the end of the slider mounting section that extends into the aperture.

Given the foregoing, Applicant respectfully submits that Larson and Bennin should not be combined to render the claimed invention obvious, since such combination would not have been obvious to a person skilled in the art. It is clear that Larson and Bennin do not contain any suggestion (express or implied) that they be combined, or that they be combined in any specific manner to obtain the claimed invention. Each reference is complete and functional in itself, so there would be no reason to use parts or structures from, or add or substitute parts or structures to any other document. Further, the cited references take mutually exclusive paths and reach

different solutions to similar or different problems that the respective documents address. They effectively teach away from each other (expressly or by implication), therefore it would not be logical to combine them. Even if the documents can somehow be combined, it would be necessary to make modifications, not taught in the prior art, in order to combine the documents to obtain the claimed invention. Such modifications would only be apparent with impermissible hindsight reconstruction given the benefit of the disclosure of the claimed invention.

In the Office Action, the Examiner concluded that it would have been obvious to combine Larson and Bennin, but failed to show any basis for such obviousness, and failed to rebut the evidence of non-obviousness to combine offered by Applicant above. The Examiner only provided a broad statement that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the suspension assembly of Larson with the conductive leads formed on the flexure in view of the teachings of Bennin". The finding of obviousness should not be based solely on whether a prior art can be modified by another prior art, but based on consideration including the desirability of such modification, and whether such modification should be made in the first place. The Examiner's conclusion without proper basis and/or rebuttal of Applicant's arguments is prohibited under the MPEP. Applicant respectfully requests the Examiner to clearly set forth the basis why Larson should be modified with the teaching of Bennin.

There is therefore no teaching or suggestion (expressed or implied), taking into account only knowledge which was with the level of ordinary skill at the time the invention was made, if and how Larson could be modified with the Bennin integrated lead suspension assemblies, while maintaining the limiter designs that Larson proposes for its non-integrated lead suspension

assemblies. Such modification is only possible with impermissible hindsight reconstructions, made possible only by the disclosure of the present invention.

Accordingly, independent claim 1 is patentable over Larson in view of Bennin.

Concerning the dependent claims rejected based on a combination of Larson and Bennin, Applicant disagrees with the Examiner's conclusion of obviousness. In view of the traversal of the rejection of claim 1 above, these dependent claims should therefore be patentable over Larson and Bennin, regardless of the basis for combining Larson and Bennin.

c. Rejection of Claims Based on Larson in view of Bennin and Takagi

Claims 2-8 and 27 have been rejected based on Larson in view of Bennin and Takagi. Applicant disagrees with the Examiner's conclusion of obviousness.

Claims 2-8 are dependent from claim 1. In view of the traversal of the rejection of claim 1 above, these dependent claims should therefore be patentable over Larson and Bennin, and further in view of Takagi, regardless of the basis for combining these references.

Applicant adds that with respect to claim 27, similar to claim 1, Larson and Bennin in combination do not disclose a suspension assembly having the **terminating end** of the slider mounting section interacting with the limiter. Takagi does not make up for the deficiencies of Larson and Bennin. Like Bennin, Takagi is also directed to a limiter configuration in which limiters are deployed on the sides of the slider support. Accordingly, even if Takagi can somehow be combined with Larson and Bennin, the combination does not result in the present invention defined in claim 27.

Further, with respect to claim 6, the Examiner relied on Fig. 10 in Takagi to show a hook member that interacts with the limiters. However, Takagi does not teach a hook member **defined in the aperture**, as required by claim 6. Instead, Fig. 10 in Takagi shows hook shaped members at the distal end of the flexure, not in an aperture in the context of claim 10. The location of the hook shaped members in Takagi are specifically designed to be positioned at the distal end of the flexure to provide the desired interaction with the load beam. The specific locations of such interactions affects the extent of relative travel of the flexure with respect to the load beam. Further, Larson's flexure design requires flat stop on the flexure for the limiters. Takagi's design in Fig. 10 requires bending of the flexure. Consequently, it would not have been obvious to modify Larson and/or Bennin to include hook members such as the ones disclosed in Takagi, without complete redesign of their suspension assemblies.

d. Rejection Based on Larson in view of Bennin and Simmons

Claims 9-13, 21-23 and 28 have been rejected based on Larson in view of Bennin and Simmons. Applicant disagrees with the Examiner's conclusion of obviousness.

Claims 9-13 and 21-23 are dependent from claim 1. In view of the traversal of the rejection of claim 1 above, these dependent claims should therefore be patentable over Larson and Bennin, and further in view of Simmons, regardless of the basis for combining these references.

With respect to claim 28, similar to claim 1, Larson and Bennin in combination do not disclose a suspension assembly having the **terminating end** of the slider mounting section (of the flexible member) interacting with the limiter. Simmons does not make up for the

deficiencies of Larson and Bennin. Like Bennin, Simmons is also directed to a limiter configuration in which limiters are deployed on the sides of the slider support. Accordingly, even if Simmons can somehow be combined with Larson and Bennin, the combination does not result in the present invention defined in claim 27.

e. Rejection Based on Larson in view of Bennin and Supramaniam

Claims 16-20 have been rejected based on Larson in view of Bennin and Supramaniam. Applicant disagrees with the Examiner's conclusion of obviousness.

Claims 16-20 are dependent from claim 1. In view of the traversal of the rejection of claim 1 above, these dependent claims should therefore be patentable over Larson and Bennin, and further in view of Supramaniam, regardless of the basis for combining these references.

4. New Claims

Applicant added claims 30 to 32 to round out the coverage for the present invention, and to further distinguish from the cited references.

Claim 30 requires that the terminating end of the slider mounting section is located in the aperture between the slider mounting section and the first section. This clearly distinguishes from Larson, in which the tabs 358 not only do not terminate on a slider mounting section, but also are not found in the aperture between a slider mounting section and the first section.

Claim 31 requires that the longitudinal, generally flat flexible member have an longitudinal axis along which the slider mounting section extends to its terminating end. This more clearly defines that the terminating end of the slider mounting section is along the longitudinal axis at the end of the extending slider mounting member. This contrasts from Larson, in which there is no terminating end along the longitudinal axis, which end interacts with the limiter.

Claim 32 requires the slider mounting section to have sides along a longitudinal direction of the load beam, and the sides of the slider mounting section are spaced apart from the frame by portion of the aperture. This more specifically require that the sides of the slider mounting section is separated from the frame by a portion of the aperture into which the slider mounting member extends. Since the terminating end is on the slider mounting member, the tabs 358 in Larson cannot be construed to correspond to terminating ends of a slider mounting section.

CONCLUSION

In view of all the foregoing, Applicant submits that the claims pending in this application are patentable over the references of record and are in condition for allowance. Such action at an early date is earnestly solicited. **The Examiner is invited to call the undersigned representative to discuss any outstanding issues that may not have been adequately addressed in this response.**

Respectfully submitted,

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